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Rubeola

1825

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An Essay  
On  
Rubeola  
for the Degree of  
Doctor of Medicine  
By  
Orris A. Browne  
Of Virginia

Sept. 22  
1887

Mr. Gray

Dear Sir

In reply to

your letter of

22/9

receiving the  
of the

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An Essay de

This disease is placed by Doctor Cullen under the title Rubella, in the class pyrexia, and order exanthemata, and is defined a contagious fever of the inflammatory kind, attended with sneezing, watery eyes, and a dry cough; on the fourth day, or a little later, small spots crowded together scarcely prominent break out, and are converted after three days into small perfoliaceous scales.

The only circumstance which deserves our attention in this definition is the declaration of its being produced by contagion.

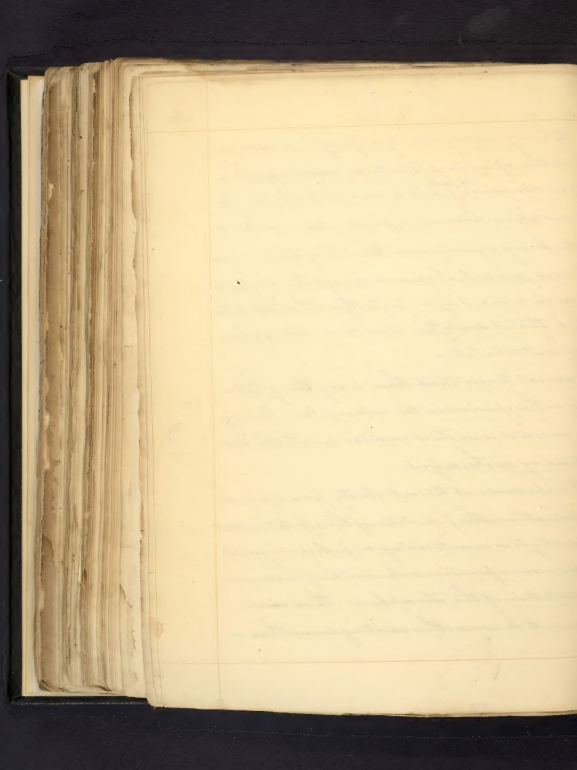
It is not my intention to enter fully into the discussion of this question; and will merely remark that the highest authority is in favour



of its being propagated by a specific miasm; and that the opinion is founded on reasoning, and a strict observance <sup>of facts</sup>, which are not to be shaken by speculation however refined. But whilst I express my dissent from the belief that when it does prevail, it assumes always the character of an epidemic, I agree perfectly with those who think that it does often occur from atmospheric distemperatures.

I do not know that there is any thing heterodox in this opinion; on the contrary, I am firmly convinced it is in strict accordance with the best testimony on the subject.

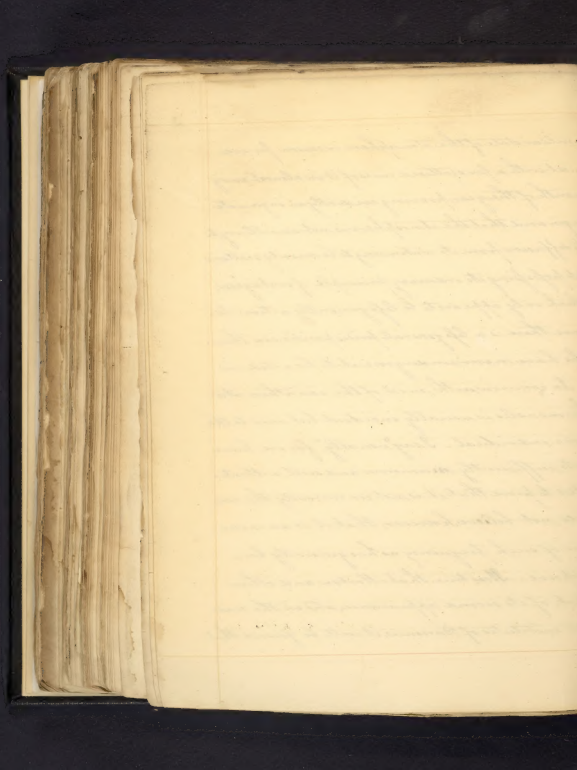
It is epidemic at times, probably from a general predisposition in the population of the affected district or country to receive its contagion, perhaps originate it from some peculiar, unknown temperature or constitution of the atmosphere. There seem however to be some other exciting causes, than a





peculiar state of the atmosphere or season, for we meet with a few scattered cases of it in almost every month of the year, proving evidently an ingenerate origin and that the atmosphere is not auxillary to its diffusion from its continuing to be merely scattered, yet preserving its ordinary principle of contagion, which only appears to be less generally active because there is a less general predisposition in those who have never undergone it to be acted on.

In common with most of the exanthemata the measles is usually incident but once to the same individual. I say "usually," for we have facts sufficiently numerous and well authenticated to prove that it is not universally the case. I do not believe, however, that it is an recurrence of such frequency as has generally been supposed. It is true that Morton and others speak of its second appearance, and in the medical institutes of Bononus, it will be found that



the measles has not only occurred a second, but even a third time in the same individual.

Too much reliance, however, should not be placed on the reports of these gentlemen. Their incompetency to decide on a question of this kind, must be apparent to every one who has acquainted himself with the facts, that this disease was confounded by them with others, which it closely resembles. Doctor Willson (than whom it would be in vain to search for higher authority) asserts that he has never met with an instance.

The anomaly then is unquestionably less frequent than in scarlet fever, and shows that the influence produced by the rubellous action on the habit is more rapid and effective.

It appears, now, usually when even though no age is altogether exempt from it.

Many persons are constitutionally free from attacks of this disease, and with the exception of



such a very inconsiderable portion, pass the period of childhood without being affected by it; and this affords an explanation of its being observed so seldom in adult life

It prevails most frequently in the winter and spring, commencing in the month of January and ceasing soon after the summer solstice. It is also of frequent occurrence in the autumn and winter; and it is a fact worthy of recollection, that all extremes of weather augment its violence. In the fall, it is rendered more violent, by the existence of the bilious diathesis, which usually prevails at that season

The measles is not confined exclusively to the human race. Like most other epidemics, it frequently shows its effects on many of the domestic animals. This was remarkably the case in the year eighteen hundred and one when in the short space of four months it



prevailed almost every part of the United States

The vulgar opinion with respect to the periodical occurrence of measles, does not appear to be destitute of support. It would be in vain to attempt an explanation of the fact. No law of epidemics with which we are yet acquainted will assist us in the solution of the problem, and our knowledge of the laws of contagion, will be equally ineffectual.

Observing the good effects which resulted from inoculation in small pox, it was but reasonable to conclude that similar benefits would result from its mitigating influence in this disease.

Doctor Horne was the first to take this subject into serious consideration; he instituted a set of experiments, by which he thinks he has established its utility. Unfortunately, however, for that benevolent enterprise, the conclusions arrived at by him, have not been confirmed by sub-





sequent experiments to any considerable extent.

We are told that they have completely failed in England, and that a similar consequence attended their repetition in this country, particularly in one of the dispensaries of this city.

These experiments are notwithstanding relied on by authority of the highest respectability, and like the professor of the *materna Medica*, I incline to the opinion, that they have been judged over, with an indifference, which their importance does not merit.

Should morbillous inoculation ever prove successful, great benefit may be expected to result from practicing it in habits predisposed to certain diseases, particularly, scrophula, and pulmonary consumption. It is well known that when a patient labours under a predisposition to any particular complaint, it is apt to be called into operation, by an attack of the



measles. And as the complaint which is predisposed to, is more apt to supervene when the exciting cause is violent, it follows as an axiom, that any circumstance calculated to produce in its operation, any degree of mitigation, would be attended by consequences of a highly beneficial nature.

In performing his experiments Dr. Horne met with considerable difficulty from the disease not forming in all, and his not being able to collect a sufficient quantity of broken cuticle at the time of disquamation to produce the disease. — The acid serum of the eyes was also employed without his being able to produce the disease. He then drew blood from a large cutaneous vein, where the eruption was most confluent, which he squeezed upon a piece of cotton, and applied to a puncture made in each arm. It was permitted to remain there



days and was confined to the heart with considerable  
fever.

For a considerable length of time Rubola, and  
small pox, were considered as mere varieties of the  
same disease, and we are indebted to Sydenham  
for the first accurate description of it. It is essen-  
tial that it should not be confounded with either  
scarlatina, or small pox, as the treatment best suit-  
ed to these cases, would be entirely inapplicable to it.

It occurs under the three following varieties  
First "*Rubola vulgaris*" Second "*Rubola sine catar-*  
*rho*" and Third "*Rubola nigra*" which shall be chosen  
of in the order in which they are placed.

The "*Rubola vulgaris*" or common measles usually  
commences from ten to fourteen days after the con-  
tagion has been received, and in its first attack it  
is difficult to distinguish it from other forms of  
fever. The patient, for the first day, complains  
of alternate chills and heat. On the second



though not sometimes, till the third day, the fever is completely formed, and certain symptoms arise by which it may generally be distinguished from other febrile complaints - The symptoms of the eruptive fever, therefore, may be divided into those which it has in common with other diseases and those which characterize it.

Along with other symptoms common to febrile complaints the patient generally complains of much thirst, is often troubled with nausea, and sometimes with vomiting - the tongue is commonly white and moist - In the more alarming cases, subsultus tendinum, shakings of the limbs, delirium, or what more frequently happens, coma supervene. By some this last circumstance is regarded as one of its diagnostic symptoms - It should not be overlooked in forming the diagnosis of any eruptive fever, in all of which it is more apt to occur, than in fevers properly so called.





Headache is a general complaint with adults and it has been observed that children appear unusually nervous. Pains of the back and loins also attend at this period; the face is flushed the pulse frequent and hard, the respiration hurried, frequent, and sometimes interrupted with sighs. These symptoms generally suffer some remission in the morning, ~~increasing~~ <sup>returning</sup> in the evening with increased severity.

On the third day, the nausea and vomiting increasing or appearing now for the first time the skin becomes hotter, and more parched. If the patient has hitherto escaped delirium it frequently ~~she~~ <sup>it</sup> occurs on the evening of this day, or increases if <sup>it</sup> had supervened at an earlier period. When there is no coma the inquietude is considerable, and the sleep, if there be any, disturbed. The inquietude and disturbance of mind says Wharton, is greater in measles, than in the



smallpox

The matter rejected by vomiting is generally bilious, and when a diarrhoea comes on ~~and~~ which is also a very common symptom, the stools are frequently of the same kind; and in child born for the most part of a year, when the diarrhoea does not impede the appearance of the eruption.

In other cases, however, the bowels are costive and sometimes there is a tendency to sweating. Adults, Frank says, have been observed to sweat, but not so profusely, or frequently as in smallpox. These sweats, he remarks, often prove beneficial.

These are the symptoms which are common to measles and other forms of fever.

On the second day, if not earlier it is attended with a dry cough and hoarseness with a sense of heaviness in the head and eyes. The cough sometimes precedes the other symptoms. It is observed by Hoffmann



that it sometimes precedes the patient a fortnight before the liver comes on. When the measles epidemic in London in the year 1753, Boerhaave remarks, the cough often preceded it, for seven or eight days. Pain in the throat, head and back sometimes accompanies such cases. The throat becomes inflamed about the time the cough comes on, which impedes deglutition, and increases the secretion of saliva. A sense of oppression and uneasy tightness about the breast, occasioning a degree of dyspnoea generally attend. The eyes are red, swollen, itchy, very sensible to light, and watery, the tears sometimes falling over the cheeks.

The lachrymiferous membrane is also inflamed and a copious secretion often runs from it, and occasions frequent sneezing. Hemorrhage from the nose, often attends, and has sometimes been so profuse as to threaten danger.

Epileptic fits are not so apt to precede measles



as small pox, but are of frequent occurrence.

The nature of the case is put beyond a doubt upon the appearance of the rash, which shews itself usually on the fourth, but sometimes on the third, fifth, or sixth days of the febrile disorder. It is first observed on the forehead and chin, and then over the rest of the face; and on the following morning, it is visible on the neck and breast, spreading towards evening over the trunk of the body, and lastly over the extremities. During this day the efflorescence is most vivid; but on the following, the sixth, it begins to ~~fade~~ <sup>subside</sup> and subside, while the patches on the body are highly red.

But these in like manner, begin to fade on the seventh day, and the patches on the back of the hand, which usually appear last, sometimes on the sixth or even seventh day of the fever, do not always decline until the eighth





On the ninth day discolorations only remain which vanish before the end of the tenth.

Upon the appearance of the eruption, the catarrhal symptoms, and even the fever, are considerably augmented; but the latter usually ceases when the eruption declines.

The diarrhoea if it has not already appeared now presents itself, with considerable relief to the other symptoms. This however, is the period when the catarrh is occasionally aggravated to acute inflammation of the lungs, which is more obstinate than ordinary pneumonia, and on which hectic sometimes supervenes, and ultimately Hydrothorax, spitting of blood or confirmed consumption.

Other inflammatory affections are liable to occur at the close of the disease, which prove tedious and troublesome, and are also of a more unimagingable character than the com-



more forms of those diseases

The diagnosis is by no means difficult. The only disease, with which there is any danger of confounding it is scarlet fever; and as it is of considerable importance that their distinguishing marks should be well understood, a few of the most prominent of them, will be detailed.

In scarlatina the cough and ophthalmia are slighter than in measles, the eruption appears sooner usually on the third day is not so well defined, and the cuticle, turns into a smoother surface and is of a much brighter hue.

In the sound of the cough in measles there is a peculiar hoarseness, accompanied occasionally with an affection of the glands. But there is less swelling and stiffness than in the glands of the throat as affected in scarlatina.

There is an appearance of the rash first noticed by Dr Willan which with the virus is correct.



diagnosis should be particularly attended to.

It first shews itself in distinct, red, and nearly circular spots, somewhat less than the ordinary anole of flea bites. As these increase in number, they coalesce, forming small patches of an irregular figure, but approaching nearest to semicircles or crescents. This observation is of considerable importance; for though entirely overlooked by ordinary observers, it is commonly very manifest and therefore a valuable diagnostic guide. These patches are intermixed with the single circular dots, and with irritations of the natural colour of the skin.

On the face they are slightly raised so as to give the sensation of inequality of surface to the finger, passed over the cuticle. There is indeed a sensible swelling of the whole face at the height of the eruption; and the tumefaction of the eyes is so great as to close the



eyes for a day or two as in smallpox. They are not so much elevated as other parts of the body.

The prognosis is unfavourable in proportion as the gastric or cephalic symptoms are more violent and obstinate. Every pneumonic affection is a bad symptom, especially if attended by an oppressed respiration. The disappearance or paleness of the eruption, with vomiting, soreness or tenderness of abdominal region, diarrhoea, or all of these symptoms combined are highly unfavourable.

The habits of body in which the measles is more apt to prove benign or otherwise, are far from being well ascertained; amongst all we know on this subject is that it is particularly unfavourable in pthisis, and still more so in scrophulous habits. The measles appears to be less dangerous in pregnant women than the small pox. Doctor Hilden says he never knew any harm done by it in pregnancy.





The appearances on dissection are an erythema in the trachea, and large bronchi of the bronchia this is particularly the case when the patient dies during the eruption, which, may account for the increase of cough after its appearance.

The mesenteric glands are found indurated and tumours of various size in the lungs some of them containing pus, are also found.

Such appearances however are not connected with the measles, but with other complications with which it is complicated.

"From the lungs being so much <sup>involved</sup> ~~involved~~ in this disease, it might be supposed that it is <sup>involves</sup> ~~involved~~ in them. There are ample reasons however, for supposing it to be otherwise, and it is not improbable that the disease is <sup>involves</sup> ~~involved~~ in some of the abdominal viscera; and most, probably the stomach; and that the affections of the lungs and thorax are symptomatic."



There is no complaint the treatment of which is less liable to be extended too far, or wholly neglected.

In the mild cases it is generally considered useful, it is not imprudent to interfere. Some children do well without the aid of medicine, and infants may be easily lost, even on cases of applications.

It is desirable that advice should not be delayed in severe, and that it should be cautiously given in slight examples of this disease, as loss of time may be fatal in the former, and too much officiousness dangerous in the latter. We are in perpetual hazard of doing too much or too little in the practice of physic. For it is at all times no easy task to make our measures just fitted for the removal of the urgent symptoms, without exhausting the resources of the system; and having once adopted speculative and practical principles, we are apt to sacrifice a great deal to maintain them, so that we sometimes cling to fallacies for the sake of appearing



consistent. This same species of fever, it cannot be too often repeated, may have varieties so different, as to require different modes of treatment; and our means should be changed, according to the nature of those varieties, that they may generally speaking, be safe in each and efficacious in all.

When called to a patient who is really in want of medical assistance, the leading object should is to evacuate the alimentary canal completely. For this purpose it is best to commence with the exhibition of an emetic, the benefit of which is not restricted to the evacuation which it produces. In the first place it gives an universal shock to the system, well calculated to produce a complete change of condition; in the next place, it occasions a considerable pressure over the abdominal viscera, and may thus remove engorgements there, particularly about the spleen and liver; and in the last place, it powerfully determines the blood to the surface of the



body, an effect highly desirous in most internal congestions. When there is much determination to the head, the emetic practice appears somewhat questionable. In such cases, however, vomiting is frequently present, and then I cannot perceive any disadvantage likely to occur from promoting its operation. This may in general be effected by the blandest diluents, but in many cases, and particularly when there is much determination to the lungs very striking relief will follow the use of an antimonial emetic. Where the stomach is much loaded, there cannot be the least impropriety in their employment at any stage of the disease.

The emetic should be succeeded by cathartics repeated sufficiently often to procure three or four evacuations in the course of every twenty four hours until the eruption appear. After that has taken place, we must be more sparing of their use, although to a certain extent they will then





be highly useful. Indeed during the whole course of the disease, it is of the first importance to keep the bowels open. Very few cases ever occur in which it becomes necessary to employ drastic purgatives. In a great majority they would be productive of harm. Most commonly the Sulphates of Soda or Magnesia answer remarkably well. Calomel may be resorted to when the excitement is great.

Having by these means evacuated the alimentary canal, the next remedies to be employed are those which favour the production of the eruption. For this purpose the mild diaphoretics, and diluent drinks, moderately warm are the most appropriate articles.

The employment of blood letting has met with the approbation of almost all practitioners.

By some it is employed at the height of the eruption, by some at the close of it, and by others at any period of the disease when the symptoms



are very distressing - Doctor Heberden placed great reliance on it. He considered all other remedies as useless, with the exception of, such as the occasion: al symptoms would require in any other fever.

According to Dr Willan a mere oppression of respiration, with laboured pulse on the first ~~and~~ second day of the eruption does not demand the employment of the lancet. He says it is common to other eruptive fevers, and usually disappears in the course of twenty, four hours, and may be left to the natural termination, even in adults. On the other hand, when it is attended by a hard cough, and pains in the chest, with a difficulty of breathing after the eruption has disappeared, bleeding and cupping, may be repeatedly necessary, aided by Histers and demulcents with anodynes. The quantity of blood to be drawn, must be regulated entirely by the judgment and experience of the practitioner.



Perceiving the benefit derived from the application of cold in small pox and scarlatina it has been recommended with equal freedom in the measles; and the practice is still defended by some, particularly the followers of Brown & Sydenham, although opposed to keeping the patient warm in measles, says nothing of the application of cold; and Morton who is temporarily adopted the same practice, in which they are followed by the best practitioners.

There is, no doubt, says Doctor Cullen, that internal heat may be very hurtful, in the measles and most other inflammatory diseases, and therefore the body ought to be kept in a moderate temperature during the whole course of the measles; but how far at any period of the disease, cold air may be applied with safety we are yet uncertain. Analogy, though often the resource of physicians, is in general fallacious; and, further



though the analogy with the small pox, might lead to the application of air during the impetive fever of measles, the analogy with catarrhs seems to be against the practice. After the eruption had appeared on the skin, we had many instances of cold air making it disappear, and thereby producing much disorder in the system, and have also had frequent examples of such disorder being removed by restoring the heat of the body and thereby bringing forth the eruption.\*

To which Dr Caldwell subjoins the following very judicious remarks. "The temperature of the chamber in the treatment of measles should be precisely the same as in that of pneumonia moderate, not in either extreme. If the air is a temperature a little too high is less apt to prove injurious than one too low. Hence as in the treatment of most other febrile affections the preservation of a medium of temperature should be carefully

\* This & lines, paragraph 849





preserved. Whatever degree of heat or cold produces on the system, an unpleasant impression as an irritant will increase fever and ought therefore to be avoided.

Mr. Magrath of Plymouth has treated a great number of patients in the hospital of the mill prison by cold affusion, in which the practice is stated to have been highly successful.

He affirms, that he has never witnessed any of the untoward circumstances which are usually to be apprehended from cold, such as the introduction of the eruption, increase of the catarrhal symptoms &c; but on the contrary, he is persuaded, that the inflammatory affections of the chest, which are apt to supervene on the decline of the rash, are prevented by the suppression of the early excitement, to the violence of which they are chiefly to be attributed.

The propriety of such practice appears quite



plausible, but it is so directly in opposition to the experience and advice of the profession it would be hazardous, I think, to attempt an imitation of it.

It is not uncommon for convulsions to appear during the eruption from. In such cases if constipation be present the bowels must be evacuated by enemata and cathartics; and if the patient can swallow it will be of service to give an emetic. Venisection may be also practised and the warm bath should not be neglected.

To allay the cough attendant on measles, the usual remedies employed in other cases may be had recourse to.

When the rest of the patient is disturbed it will not be improper to employ opiates; and it will be advantageous to combine them with some diaphoretic, thereby procuring sleep, and at the same time determining to the surface. A pe-



delirium also, will be found of service, and should not be overlooked

If expectorants are judged to be necessary, those most commonly in use, may be employed

The pneumonic symptoms, which supervene do not differ from ordinary pneumonia, and must be treated accordingly

The diarrhoea which, frequently occurs at the close of measles is found to alleviate the pneumonic symptoms, and to prevent some of the troublesome sequelae already noticed. Hence this evacuation should, not be interrupted, at least for a few days; and laxatives should be administered when it does not take place, as the most advantageous mode of allaying and preventing inflammatory symptoms. If the usual diarrhoea should be restrained, however, the patient will require the support of light but nutritious diet and cordials. When it is found necessary



to put a stop to this discharge in addition to the remedia in ordinary use, much benefit may be expected from small and frequent abstractions of blood.

Should ophthalmia, hepatitis, scrophula, or pulmonary affection arise, the treatment is precisely the same as if it proceeded from any other cause.

It ought to be particularly borne in mind that throughout the treatment of measles a strict antiphlogistic regimen is to be observed.

When the fever has changed to typhus, at whatever period this happens, the opposite plan of treatment becomes necessary. Evacuations and warm refrigerants are then hurtful. Wine, bark, opiate, and as nourishing a diet as the stomach can receive, are then the remedies to be depended on.





Having said as much as my limits will permit on <sup>the</sup> subject of the measles as it usually occurs I come now to that variety of it which has received the appellation of "*Rubcola sine Catarrhâ*"

Instances of this variety occur frequently, when there exists an epidemic Rubcola; and is only important, as it leaves a susceptibility of receiving the febrile measles after its occurrence. — The only peculiarity in the course and appearance of the eruption, that it is not accompanied by either fever, catarrh or opthalmia. The treatment in severe cases of this form of measles, is the same as that already detailed.

There is yet another variety of this complaint which merely requires to be mentioned — the "*Rubcola nigra*" — This epithet is applied by Doctor Willan to an appearance of the measles about the seventh, or eighth day, when the rash becomes suddenly livid with a mixture of yellow. It is



said to be devoid of danger or even inconvenience,  
and is removed in a week or ten days by the  
mineral acids.

Philadelphia

22<sup>nd</sup> February 1825

\*Baker's synopsis

